1634

In The United States Patent and Trademark Offic

Application Number: 09/494,212 Examiner: Bradley L Sisson
Applicants: Shi-Lung Lin Group Art Unit: 1634
Filing Date: 01/25/2000
Title: Method for Generating Full-Length Messenger RNA Library

Date: July 16, 2003

RESPONSE

Honorable Commissioner for Patents,
P.O. Box 1450,
Alexandria, VA 22313-1450

Sir:

In response to the Office Communication mailed 06/16/2003, the applicant kindly submits as follows.

1. The Examiner appears to allege that the response filed on March 18, 2003 fails to indicate where support for the new limitation is to be found in the original disclosure.

2. In the Amendment F filed on 03/18/2003, the limitation of "sense-oriented full-length" mRNAs is added. Please note that the orientation of messenger RNA (mRNA) is defined as a sense strand; thus, the "sense-oriented" mRNA is actually a redundant description in order to emphasize the claimed products of the present invention.

3. As taught in the page 4, line 5 of the original filed specification, the cDNA template is generated using oligo(dT) primers from the farmost 3'-tail of mRNAs (equal to 5'-end of the cDNA); and, in the page 4, line 9, a polynucleotide tail is added to the 3'-end of cDNA by terminal transferase for next step of RNA promoter incorporation as shown in the page 4, line 13. Because the tailing activity of terminal transferase occurs most effectively from a protruding or blunted 3'-end of cDNA, only full-length cDNA formed from the 3'-tail to the 5'-end of mRNA can be tailed. Therefore, the claimed

procedure has actually indicated a method for generating full-length cDNA and also mRNA.

4. Also, in the page 6, line 18, of the disclosure, it is indicated that the present invention is useful for cloning full-length mRNA (gene transcript) sequences. In the page 8, line 13, it is indicated that the final mRNA products are full-length and can be directly used to generate a complete cDNA library. In the page 9, line 10, it is indicated that the amplified full-length mRNA products of the present invention is useful for in-vitro translation.

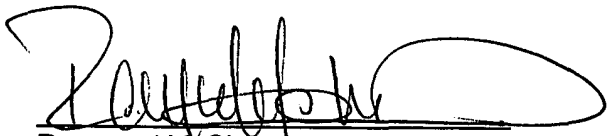
5. In addition, in the page 11, line 22, of the disclosure, it illustrates how to amplify full-length mRNA from as few as several LNCaP cells as described in the Examples 3 and 4. The results were shown in the Figs.4a&b, which have been published in the Dr Shao-Yao Ying's "Generation of cDNA Libraries" book chapter 12 (see the information disclosure submitted herewith).

6. In view of above, the added limitation has been taught in the original filed specification. In order to clarify the claimed subject matters of the present invention, the applicant herein added "sense-oriented full-length" in the front of the amplified mRNA products of the present invention.

7. In view of the above, it is submitted that the response filed on March 18, 2003 should be fully responsive and the claims are in condition for allowance. Allowance of claims at an early date is solicited.

8. Should the Examiner believe that anything further is needed in order to place the application in condition for allowance, he is requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,



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